

SUBJECT AREAS:

Natural science

ACTIVITY DESCRIPTION:

Discussion, games.

OBJECTIVES:

To teach the concept of natural resources and the types of natural resources

To raise awareness about the need to use natural resources in a sustainable way

MATERIALS:

Blackboard or flip chart, flash cards/stickers, markers, printing materials (test/questionnaire)

GRADE/LEVEL:

Secondary school (15-18)

DURATION:

Preparation time: 20 min.

Activity time: 25 min.

PLACE:

Classroom

AUTOR:

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Natural resources

INTRODUCTION:

Resources are things which we can take from the environment and use to make humans lives better. Some of these resources (air, water, plants, animals, solar energy) are immediately available, but other resources (fossil fuels, minerals, and underground water) are only available after we extract them or transform them to most useful form. Natural resources fall under two main categories: renewable and Non-renewable Resources. Renewable resources are those that can be reasonably replaced or recovered. Non-renewable resources are those that cannot be replaced once they are destroyed, and for that reason we will need to find alternatives. Conserving resources by using less, by reusing what we already have, and by recycling materials to be used again can slow the process of depletion. This is the reason why modern society has introduced the concept sustainable use of resources. Using more of the resources results in environmental degradation. According to this, we wonder: Which is the maximum amount of a resources that can be taken for our purposes that does not endanger its natural regeneration?

BACKGROUND:**Procedure:**

- Ask the students to name some things that people take from nature in their needs and write their answers on the blackboard/flip chart. For example: from water – energy, drinking water; from forests/plants-food, wood, medicine, recreation, home of wildlife, cotton etc.; from minerals: glass, ceramics, jewelry, cans etc.; from soil: agriculture; from rock: shelter, constructions etc.; from animals: food, recreations, wool, feathers etc.
- Explain to the class that natural resources can be renewable or non-renewable.
- On separate flash cards write the names of the following energy and material resources:

- Oil, solar energy, wind energy, natural gas, ore; geothermal heat, waves and

- Plants, animals, soil, air, ore (iron, copper, aluminum, silver, gold, platinum, and other metals), fresh water (rivers, lakes, stream, wells), construction materials (stone, sand), etc.

Then on the blackboard/flip chart draw one table with two columns for renewable and non-renewable resource. Begin the discussion and categorize the resources from the flash cards, distributing them in the two columns.

Explain to the students the advantage and disadvantages of various natural resources. Give examples. Explain that people nowadays use much more resources than at any other time in human history. Together with the students, decide which of the mentioned resources are the most available in your country.

FUN FACTS:

- *The world economy uses around 60 billion tons of resources each year to produce the goods and services which we all consume. On average, a person in Europe consumes about 36kg of natural resources per day; a person in North America consumes about 90kg per day, a person in Asia consumes about 14kg, and a person in Africa consumes about 10kg of resources per day.*
- *Global water demand for manufacturing is expected to increase by 400% from 2000 to 2050.*
- *Natural resources such as sunlight, wind, rain, tides, waves, and geothermal heat provide renewable energy that does not require large quantities of fresh water.*
- *The U.S. consumes more than 1.3 billion liters of water per day and has the third highest “water footprint of consumption” of any country in the world*

ASSESSMENT:

Make a test/questionnaire: What we learn for natural resources and ask the students to do it as an individual task with choosing true or false. Also, you can discuss with students to explain why these statements are true or false.

Statements/claims:

1. Solar energy is a renewable and inexhaustible resources!
2. Resources are things we take from nature to satisfy our needs and wishes!
3. We are depleting the natural sources of oil!
4. People only need clean air, fresh water, delicious food, and shelters!
5. When I cut down a tree I should think about where I can plant another one!
6. We can take as many fish as possible from the lakes/rivers/seas and there will always be more!
7. By using things more than once we save resources and energy because we don't have to replace them right away!

EVALUATION:

Ask the students to do an analysis according to household accounts and to give an information about how much water their family uses during in a month, and how often they throw away food.